

Political Economy of Electricity Distribution in Maharashtra

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Acknowledgments

This working paper was written as part of a collaborative research project, Mapping Power, which aims to provide a state-level analysis of India’s electricity governance. The project is coordinated by Sunila S. Kale (University of Washington, Seattle), Navroz K. Dubash (Centre for Policy Research), and Ranjit Bhavirkar (Regulatory Assistance Project), and carried out by a team of 12 researchers. The research explores the views and perspectives of various stakeholders and organizations in each state and how they will be affected by new initiatives in India’s electricity sector, as well as the forces and constraints that shape decision-making in electricity governance. Using data from qualitative interviews with key informants buttressed by quantitative data, the research team covered 15 states as part of the analysis: Andhra Pradesh, Bihar, Delhi, Gujarat, Jharkhand, Karnataka, Madhya Pradesh, Maharashtra, Odisha, Punjab, Rajasthan, Tamil Nadu, Uttarakhand, Uttar Pradesh, and West Bengal. You can learn more about Mapping Power as well as access other working papers in the series here: <http://www.cprindia.org/projects/mapping-power>.

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Introduction

Maharashtra occupies the western and central part of India. It is the second largest state in the country in terms of population (11 crore) and the third largest in terms of geographical area (3.08 lakh square kilometers). Maharashtra has a rich historical and cultural tradition, and it has also been a leading region in educational, literary, and cultural fields in India. In the post-independence period, Maharashtra was one of the most economically advanced states. Currently, Maharashtra has 9.3 percent of the total population of India and its contribution to national income is about 15 percent, which is the highest among all the states. The per capita income of Maharashtra is Rs. 1,17,091, which is also the highest in the country¹. It is one of the most industrialized and urbanized states in India, with 45 percent of people living in urban areas, compared with 31 percent for the country as a whole. The growth of industry in Maharashtra, however, is concentrated in the industrial belt, consisting mainly of Mumbai-Thane-Pune-Nashik and Aurangabad. Further, Maharashtra has only 17.8 percent of its land under irrigation as compared to the national average of 39 percent², which severely hampers the development of agriculture in the state. Overall, wide regional disparities mark the development efforts in Maharashtra. Considering the importance of electricity in development efforts, it is no surprise that the electricity sector has been closely associated with the politics of the ruling party. The story of electricity development in Maharashtra is one of a balancing act by the state between industrial and agricultural interests. Although Maharashtra is one of the leading industrial states in India, for a long time its political leadership came from the rural areas, mainly from the rich and middle Maratha farmers. It explains why the state government consistently protected the interests of the agricultural class. Even when the rival political alliance came to power, it could not overlook agricultural interests if it wanted the political support of Maratha leaders. However, in view of the rapid technological changes in the electricity sector, the political consensus about its management faces serious challenges. The emergence of the new interests and new issues in the sector has complicated the situation further, but it has also opened new avenues of patronage for the political system. This paper tries to deal with some of these issues.

The paper begins by discussing the current status of the electricity sector in Maharashtra, then narrates how the state in Maharashtra has historically played a mediating role between conflicting interests in the electricity sector. It also examines implications of post-1991 developments in the sector. The paper then discusses the impact that two key developments have had on the political management of electricity: the establishment of the Maharashtra Electricity Regulatory Commission (MERC) and the introduction of institutionalized spaces of consumer participation in the sector. Finally, it looks at the emergence of new interests in the sector in the form of private power producers and the changing scenario in Mumbai, where private utilities dominate the sector.

¹ Government of Maharashtra (GoM), "Economic Survey of Maharashtra: 2014-15," Directorate of Economics and Statistics, Planning Department, Mumbai, 2011, pp. 1-3.

² Ibid.

I. Status of Electricity Sector in Maharashtra

There are four distribution licensees in Maharashtra: the Maharashtra State Electricity Distribution Company Ltd (MSEDCL), Reliance Infrastructure Limited (RInfra), Bombay Electricity Supply and Transport (BEST), and Tata Power Company (TPC); the latter three operate in Mumbai and its suburbs. Out of the total load of 20,147 MW at the state level, about 17,694 MW was supplied by MSEDCL during FY 2015, while the remaining 2,453 MW was supplied by the other three distribution licensees. The utilities in Mumbai have already achieved 100 percent electrification and supply power 24X7 to their consumers.

Table 1: Distribution Companies in Maharashtra

Licensee	License Area	Number of Consumers	Energy Sales (MU)
MSEDCL	Entire State	2,31,28,000	90,433 (82%)
R-Infra	Suburban Mumbai	23,91,639 (Retail)	7675 (7%)
BEST	Town Area Mumbai	10,10,299	4419 (4%)
Tata Power	Suburban Mumbai and Town Area (Parallel License)	4,92,610	6261 (7%)
Total		2,70,22,548	1, 08, 788 (100%)

Source: MERC Order, 2015

Table 2 shows consumer base of all the four distribution licensees as of 30 March 2014.

Table 2: Consumer Categories and Consumption (MUs) (by Percentage)

	Rel (Infra)	TPC	BEST	MSEDCL
Other	3%	14%	2%	37%
Industrial	8%	28%	7%	35%
Commercial	31%	37%	49%	7%
Domestic	58%	21%	42%	20%

Source: MERC Order, 2015

Out of MSEDCL's 21.4 million consumers, 14.3 million are residential, 3.7 million agricultural, 1.47 million commercial and 3, 70, 000 are industrial, 12,000 of the last category are high-tension power consumers, with a monthly consumption of 1 MW or above. As of March 2014, the state has nearly 18.73 lakh rural HHs and 0.63 lakh urban HHs that are yet to be electrified. The financial position of MSEDCL has been adversely impacted over the past few years, primarily due to factors such as less than 100 percent collection efficiency and mounting bad debts. MSEDCL provides electricity to agricultural consumers amounting to over 26 percent of its total sales. The subsidy given to agricultural and powerloom consumers by the government has been a matter of intense political debate in Maharashtra. Even after the reforms, the government not only retained the subsidy for these sections, but consistently increased the amount of subsidy—from Rs. 493 crore in 2001–02 to Rs. 4057 crore in 2011–12. Despite the subsidy given by the government, the residual recovery from the agricultural sector is only around 38 percent of the billed amount. The total installed capacity available to the state as of March 31, 2015 (including share allocated to Maharashtra) is 37, 797 MW with the following break-up:

Table 3: Available Capacity (MW) as on 31 March 2015

	Thermal	Hydro	RE	Total
State	10,232	2,885	327	13,444
Private	11,976	447	5,303	17,726
Central	6,627	0	0	6,627
Total	28,835	3,332	5,630	37,797

Source: MERC Order, 2015

The state is not able to realize the full generation potential due to various reasons, such as poor quality of coal and non-availability of gas leading to forced shutdowns. During FY 2015, MSPGCL's generation capacities recorded a PLF of only about 65 percent only. MSEDCL has signed PPAs totaling 5,465 MW with independent power producers (IPPs), out of which around 4,345 MW of capacity has been commissioned as of March 2015. Maharashtra is one of the states with the highest installed capacity of renewable energy (RE) sources in its overall energy mix. The share of RE sources in installed capacity was 25.5 percent in FY2016. In terms of energy, the share of RE sources was 9.4 percent in FY2016. In order to boost the growth of RE generation, MERC has issued renewable purchase obligation (RPO) regulations and has set specific targets for solar, mini/micro HEPs and other non-solar RE sources. The state has planned to add RE generation capacity (including solar) totaling to 14,400 MW over the next five years.

The rising cost of power has been an important issue facing the sector in the past few years. The power purchase cost of MSEB/MSEDCL increased from 25 percent (2003) to 80 percent (2013) of its total revenue requirement³. The exercise of power purchase by MSEDCL has long been contentious. Table No. 4 shows the average cost of supply of MSEB/MSEDCL, which has risen sharply in the recent past.

³ Maharashtra Electricity Regulatory Commission (MERC), Suo Moto hearing in the matter of revision and violation of Principles and Protocols of Load Shedding with respect to Circular No. 43 and 44 of MSEDCL, 26 November 26, 2012, p. 70.

Table 4: Average Cost of Supply of MSEB / MSEDCL (Rs/kWh)

Year	ACS (Rs)
1990-91	1.07
1991-92	1.25
1992-93	1.39
1993-94	1.52
1994-95	1.62
1995-96	1.85
1996-97	2.07
1997-98	2.16
1998-99	2.23
2007-08	2.66
2008-09	3.27
2009-10	3.51
2010-11	3.92
2011-12	4.14
2012-13	4.80
2013-14	5.34
2014-15	5.15

Source: Various reports of MSEB/MSEDCL

Table 5 provides a breakdown of cost components in the average cost of supply (ACS), which spotlights power purchases' increasing share of that cost.

Table 5: Average Cost of Supply and Cost Components (Rs/kWh)

Year	Power Purchase	Fuel	Employee Cost	O & M Cost	Interest Cost	Depreciation	Admin. & Gen. Exp.	Other Costs	ACS
1997-98	0.59	0.68	-	0.13	0.19	0.22	0.25	0.10	2.16
1998-99	0.61	0.72	-	0.12	0.18	0.22	0.28	0.09	2.23
2007-08	2.16	-	0.21	0.07	0.07	0.07	0.03	0.04	2.66
2008-09	2.58	-	0.30	0.07	0.10	0.08	0.04	0.10	3.27
2009-10	2.79	-	0.22	0.07	0.11	0.10	0.04	0.20	3.51
2010-11	3.20	-	0.23	0.06	0.12	0.12	0.03	0.17	3.92
2011-12	3.56	-	0.23	0.06	0.18	-0.05	0.05	0.11	4.14
2012-13	3.92	-	0.32	0.06	0.22	0.10	0.05	0.13	4.80
2013-14	3.95	-	0.40	0.08	0.29	0.17	0.05	0.40	5.34
2014-15	4.36	-	0.40	0.08	0.25	0.15	0.06	-0.16	5.15

Source: Various reports of MSEB/MSEDCL

The next section reviews the historical development of the electricity sector in Maharashtra, which provides the necessary context for understanding the more recent developments.

II. Historical Overview

Phase I: 1948-1991—Mediating Role of the State Balancing Industrial and Agricultural Interests

Before independence, there were many small generation and distribution companies in urban centres in Maharashtra. The Maharashtra State Electricity Board (MSEB), which was established in 1960, took over nearly 90 private electricity companies, with the exceptions of the Bombay Suburban Electricity Supply (BSES) and TPC. MSEB soon became one of the better-performing utilities in the country. The political leadership in Maharashtra was socially and economically progressive; it focused on the twin policies of industrialization in urban centers and development of cooperative agro-industries in the rural areas. The industrial and trading lobby was strong because of the inclusion of Bombay in Maharashtra, but agricultural interests dominated the state Congress party and politics in the state. As a result, agricultural interests always played an influential role in ensuring an adequate share of resources.

Politics in Maharashtra is dominated by the Maratha-Kunbi caste cluster, which accounts for nearly 35 percent of the state's population. The Congress party enjoyed uninterrupted political power in Maharashtra till 1995 (except for a brief period in 1978, when there was a split in the party) and again from 1999 to 2014 for three consecutive terms. The Congress rule in Maharashtra has a strong institutional foundation in the form of cooperative institutions, mainly cooperative sugar factories and district cooperative banks. The three-tier structure of Panchayati Raj created by Congress in the 1960s also helped the party to create and consolidate its social base in rural areas. The Congress party was largely dominated by big and middle farmers from the Maratha community. Using their political clout, big landowners impeded the implementation of a land reform bill in Maharashtra, thus retaining family control over large tracts of land⁴.

The dominance of Maratha leaders was also reflected in the allocation of portfolios. The irrigation and power portfolio has remained in the hands of influential leaders from the cooperative movement. In the 1960s and 70s, the electricity network in Maharashtra was both expanded and improved, as MSEB sought to provide rural areas with better access to electricity. In the late 1960s, electricity pump-sets replaced diesel pump-sets, which proved a boon for sugarcane production as electric pumps were more efficient in pumping groundwater and also less costly. The class of big landowners in rural areas benefitted from the rural electrification drive as well as from the policies of the “green revolution”, which subsidized agricultural inputs.

In 1977, the MSEB took the decision to adopt a flat rate tariff⁵ for agriculture following a recommendation from the World Bank. This was done mainly to address the problem of low billing efficiency in rural areas. The big farmers from western Maharashtra got the maximum benefit of this policy as the cost of growing water-intensive crops such as sugarcane was reduced substantially. Moreover, this policy had a negative impact in the long term as MSEB could hide its losses, including

⁴ For discussion of politics in Maharashtra, see Jayant Lele, *Elite Pluralism and Class Rule: Political Development in Maharashtra* (Bombay: Popular Prakashan, 1981).

⁵ Flat rate tariff means charging consumers on the basis of the size of the pumpset instead of metered consumption.

theft, under the name of agricultural consumption. Along with the flat-rate tariff, agricultural subsidies also primarily benefited a small section of rich farmers⁶.

Another important development in the 1970s and 80s was the emergence and consolidation of *Shetkati Sanghatana* in Maharashtra, which mobilized farmers to challenge unfair terms of trade. The farmers demanded low input prices and higher farm prices. This movement further strengthened the representation of the interests of rich and middle farmers in state politics.

Overall, the state played a mediating role between the conflicting interests of industry and agriculture in this period. The supply of electricity to industries and urban centres was a priority, but subsidized power was also provided to farmers. However, the political management of the electricity sector took its toll on the sector's development. Over the years, the performance of the MSEB deteriorated, and its operational efficiency declined. There was an overemphasis on generation of electricity while the transmission and distribution (T&D) sectors were neglected, which led to a weakening of infrastructure and affected the quality of supply. The supply to agricultural consumers through low-voltage feeder lines led to high technical losses and consequent increases in cost. Many farmers installed higher-capacity pumpsets than were permitted, which led to frequent failure of transformers and poor-quality supply⁷. The high tariff for HT industrial and commercial sectors led to an increase in captive generation and theft of electricity. Further, the low tariff to agriculture resulted in depletion of groundwater because it encouraged inefficient water use. The theft of electricity and low metering and billing were the major issues that affected the performance of the board. Only 46 percent of energy consumed was metered. Moreover, the government directed the MSEB not to penalize the defaulters and not to insist on collecting dues from agricultural consumers.⁸ As a result, MSEB could not raise enough funds from internal sources to upgrade its system. The World Bank and many committees constituted by the state government recommended measures to reform the system, but there was lack of political will and little incentive for the MSEB to change how it did business.⁹

The disproportionate benefit of rural electrification to Western and Southern Maharashtra contributed to regional disparities and created unrest among people from the less developed regions. The late 1970s was also the period when the organizational strength of the Congress party began to decline and the party found it difficult to contain factionalism within its fold¹⁰. In the early 1980s, urban centers and the secondary and tertiary sector began to grow in economic importance. The Shiv Sena (SS) and Bharatiya Janata Party (BJP), which had some base in urban areas, slowly started spreading their network into rural areas of Maharashtra, especially in Vidarbha and Marathwada, the regions which had remained less developed since the 1960s.

⁶ Sant and Dixit, "Beneficiaries of the IPS subsidy and the impact of tariff-hike," *Economic and Political Weekly*, December 21, 1996, p. 3320.

⁷ Interview with ex-member of MERC on September 10, 2016.

⁸ GoM, Report of the Energy Review Committee, 2001, Part II, p. 16.

⁹ *Ibid.*, p. 21.

¹⁰ Palshikar and Deshpande, "Maharashtra: Electoral Competition and Structures of Domination," Occasional Paper Series II: 1, University of Pune, 1999, p. 25.

Phase II: 1992-1999—State as an Early Reformer and the Phase of Competitive Populism

The willingness of the Government of Maharashtra (GoM) and the MSEB to embrace reforms was clear by the late 1980s¹¹. In the early 1990s, the state shifted its focus from investing into generation to T&D as it anticipated major investments from the private sector¹². In 1992, the state government signed a memorandum of understanding (MoU) with the Enron Development Corporation for the construction and operation of a 2,015 MW thermal power project¹³. From the very beginning, various institutions in India and abroad cautioned the state government against pursuing the project¹⁴. However, Sharad Pawar, a veteran leader of the Congress party, strongly supported the project, and the GoM decided to go ahead with it. Enron was alleged to have provided large kickbacks to politicians and bureaucrats to get its project sanctioned.

The Enron project had long-term consequences on the electricity sector in Maharashtra. First, it created a huge financial burden for MSEB and affected its future course of action. The very first bill of Enron was Rs. 240 crore, and the cost per unit was Rs. 5¹⁵. Subsequently, spending on power subsidies, which was showing a declining trend in 1998-99 (Rs. 355 crore), increased nearly five-fold to Rs. 2,084 crore in 1999-2000¹⁶. MSEB, which turned a profit in FY 1998-99, reported losses of Rs. 1,689 crore in FY 1999-2000 and made a payment of Rs. 2,180 crore to the Dabhol Power Company (DPC) from May 1999 till May 2001. The burden of the DPC was approximately Rs. 6,000 crore per annum, which was expected to rise due to depreciation of the exchange rate¹⁷.

The Enron plant was revived in 2005 as the Ratnagiri Gas and Power Pvt Ltd (RGPPL), which cost the public exchequer around Rs. 6,000-8,000 crore¹⁸. Unfortunately the project never performed satisfactorily due to technical and operational reasons, and it became a huge liability for the government and people of Maharashtra. Because of the Enron project, there was no capacity addition for nearly a decade (1995 to 2005) which resulted in a huge demand-supply gap after 2005. Apart from the sufferings of the common consumers, it also affected economic enterprises in the state. The experience of Enron exhibited the failure of regulatory and oversight institutions at the state and national level.

The Enron project faced severe opposition from the local community and outside groups. The anti-Enron movement became a broad coalition of various groups: the MSEB trade unions, left political parties, urban environmental groups, *Swadeshi* wing of the RSS, and opposition parties such as the SS and the

¹¹ Sunila Kale throws light on a different initiative by the state that indicated its reformist line of thinking, such as preparation for new gas-based power projects, allowing BSES into the generation of electricity, and raising electricity tariffs (Kale, 2007, p. 230).

¹² Interview with ex-chairperson of MSEB on October 10, 2015.

¹³ Enron was a gas-fired baseload power project, which was the largest private sector power project in India. The project was divided into two phases of 695 MW and 1320 MW. The GoI recommended Enron Corporation to the GoM and provided administrative and political support in finalizing the deal. It also gave a counter-guarantee to the project that proved crucial for securing support of financial institutions.

¹⁴ The Central Electricity Authority was reluctant to give techno-economic clearance to the Enron project. The World Bank refused to provide financial assistance, citing its unsuitability for Maharashtra, and many experts in India showed techno-economic and environmental problems pertaining to the project.

¹⁵ Abhay Mehta, *The Power Play: A Study of the Enron Project* (New Delhi: Orient Blackswan, 2000), p. 157.

¹⁶ Godbole, "MSEB's Tariff Revision Proposal: Unconscionable Burden on Consumers," *Economic and Political Weekly*, Vol. 36, Issue 38, September 22, 2001, p. 3583.

¹⁷ Mehta, 2000.

¹⁸ Ashwini Chitnis and Ann Josey, "Review of Maharashtra Power Sector Policy and Regulation: Lessons, Challenges and Opportunities," Gokhale Institute of Politics and Economics, Pune, 2015, p. 6.

BJP. The movement used various forms of protest¹⁹ and made the technical issue of electricity a topic of public discussion and debate. Prayas Energy Group (PEG)²⁰, an NGO based in Pune which later became one of the main advocates of public interest in the electricity sector, played a significant role in popularizing technical analysis of the project.

The SS-BJP received an electoral benefit from the Enron controversy in 1995 state legislative assembly elections. The leaders of both parties used the Enron issue in their campaigns. According to one senior activist, “even common people started considering Enron scandalous, and that’s when the tide shifted”²¹. After coming to power in the state, the SS-BJP government first cancelled and then renegotiated the PPA with the Dabhol Power Corporation for both the stages in 1996. This decision led to a new wave of protest in the state. Importantly for the sector, it led to the process of discussion among experts and the MSEB workers’ federation about various alternative energy plans; PEG had come up with 16 types of alternatives to make power available in Maharashtra²².

Competitive Populism

The expectations of people that SS-BJP government would adopt different set of policies than Congress were not fulfilled. The new government exhibited even more reckless political behavior in case of Enron. Further, it resorted to similar populist policies, like free electricity to farmers, in an attempt to win over Congress supporters.

This phase signified further decline in the power of the Congress party in the state. The SS and BJP, using the ideology of Hindutva, successfully garnered votes from the rural areas of Maharashtra, except western Maharashtra, which remained a stronghold of the Congress party for a long time²³. The SS-BJP’s rise in rural Maharashtra also is rooted in the decline of the cooperative movement in the state. In the 1990s, many sugar factories, embroiled in mismanagement and corruption, faced financial breakdown. Although the Congress government tried to salvage them by providing financial packages, there was growing unrest among the sugarcane growers. One of the reasons behind the SS-BJP victory in 1995 was the factionalism within the Congress party. There was infighting within the powerful political families in the Satara and Sangli districts of western Maharashtra, which resulted in splitting the votes of the Congress party²⁴. Some sugar cooperators were unhappy because they did not get the ticket from the party for assembly election. Consequently, Congress rebel candidates took support of SS-BJP at some places. In a significant development, a prominent leader from Kopergaon, Balasaheb Vikhe-Patil, joined SS. The support of rebel Congress leaders helped SS-BJP to make inroads into the rural areas. Because of these various factors, the votes of the Maratha-Kunbi caste cluster were divided in a decisive manner for the first time in Maharashtra; Kunbis of Vidarbha and Konkan, Marathas of Marathwada, and large

¹⁹ They include sit-ins, demonstrations, satyagraha (civil resistance), Jail Bharo Andolan (protesters getting themselves arrested), Sangharsh Yatra (protest marches), and filing of public interest litigation in the High Court.

²⁰ Prayas was formed by professionals who wanted to use their knowledge and skills for the betterment of society. Girish Sant, Shantanu Dixit, and Subodh Wagle started working on energy issues within Prayas. Even before Prayas formally came into existence, members were socially active and part of different social movements. In the anti-Enron movement, Prayas members could use their technical and professional skills to back up the people’s struggle. In later years, it became one of the most important strategies of Prayas—to work in collaboration with social and political activists and provide them with analysis of technically complex issues.

²¹ Interview with senior activist on October 10, 2015.

²² Subodh Wagle, “The Enron Story: Controversial Issues and the Struggle,” Prayas Monograph Series, Pune, 1997.

²³ Palshikar and Deshpande, “Maharashtra: Electoral Competition and Structures of Domination,” Occasional Paper Series II: 1, University of Pune, Pune, 1999.

²⁴ “Maharashtra: Congress Decline Continues” (Comment), *Economic and Political Weekly*, May 11, 1996, p. 1100.

sections of OBCs from Vidarbha voted for the SS-BJP²⁵. At some places, SS-BJP leaders themselves floated cooperative sugar factories in an attempt to replicate the Congress model of creating institutional basis at the local level.

In October 1998, SS chief Bal Thackeray declared free electricity to farmers; BJP and then-power minister Gopinath Munde toed his line. The announcement was made to placate the rural masses who were dissatisfied with the performance of the government in implementing rural development schemes²⁶. The announcement was met with “strong reactions from the urban middle class and industrialists and businessmen who fear a steep hike in their electricity rates”²⁷. But the government went ahead and before the budget in March 1999, there was substantial reduction in agricultural tariff in the state. The chief minister also announced that in the next phase, farmers will be provided free electricity²⁸. In yet another instance, the SS-BJP government gave financial assistance to cooperative spinning mills in Maharashtra that were facing financial crisis²⁹. Thus the political adjustment made by Maratha leadership with the changing power equations in the state paid them rich dividends.

Phase III: 1999-2007—Increasing Dominance of Industry and Balancing Act by the State

The SS-BJP coalition could not sustain its power in Maharashtra. Along with its failure in performance at various levels, signing an agreement with Enron also contributed significantly to its electoral defeat. The Congress-Nationalist Congress Party (NCP) alliance came to power in November 1999 and enjoyed power for the three consecutive terms. The important portfolios of electricity and water remained with influential leaders of the NCP, including Padmasinha Patil, Dilip Walse-Patil, Sunil Tatkare, and Ajit Pawar.

After the opaque decision-making and non-responsive state governments during the Enron phase, transparency introduced by the 1998 Regulatory Commission Act was considered as transformative by social and political activists in Maharashtra. This phase was marked by the effective role of civil society organizations (CSOs) in Maharashtra, which sought to use the newly established regulatory mechanism to ensure accountability of the MSEB and to challenge the entrenched interests in the sector. The regulatory commissions were reformist in nature and tried to discipline the public and private utilities. The state government and MSEB, on the other hand, went on the defensive and tried to control the damage caused by transparency and consumer participation in the tariff-making process.

The Maharashtra government under SS-BJP rule was not in favour of establishing a state electricity regulatory commission, as it meant curtailing the powers of the political class. The expert groups such as Prayas were also skeptical about the Orissa model of restructuring as they thought it was highly “sabotage-prone” because of lack of mandatory provisions related with transparency and direct public accountability of the commission³⁰. Following the tariff hike by MSEB in 1998, some consumer groups

²⁵ Palshikar and Deshpande, 1999.

²⁶ “Maharashtra: Wooing Farmers the Wrong Way,” (Comment), *Economic and Political Weekly*, October 31, 1998, p. 2761.

²⁷ Ibid.

²⁸ Godbole Madhav, “Maharashtra Budget: More Questions Than Answers,” *Economic and Political Weekly*, March 27, 1999, p. 741.

²⁹ Godbole Madhav, “Cooperative Sugar Factories in Maharashtra: Case for a Fresh Look,” *Economic and Political Weekly*, February 5, 2000, p. 420.

³⁰ Dixit Shantanu, Girish Sant, and Subodh Wagle, “Regulation in the WB-Orissa Model: Cure Worse Than Disease,” *Economic and Political Weekly*, Vol. XXXIII, No. 17, 1998, p. 944.

went to the High Court demanding the establishment of a commission. The High Court order in March 1999 gave the ultimatum to the state government to appoint the Maharashtra Electricity Regulatory Commission within six months' time. Accordingly, MERC was established on 5th August, 1999. The chairperson of the first MERC was P. Subrahmanyam, former chief secretary of Maharashtra. The other two members were Venkat Chary, former additional chief secretary (home), and Jayant Deo, an independent practising industrial engineer³¹.

The MSEDCL submitted its first tariff revision proposal in November 1999. Immediately after the submission, Prayas made legal demands for additional data on 11 different issues from MSEDCL³². The MERC showed a very proactive approach in its early stages of existence by upholding these demands. Following the MERC directives, MSEDCL submitted additional data to Prayas. After this, it became a common practice for various organizations in Maharashtra to routinely ask for additional data from the MSEDCL. Although the data furnished by the utility was never complete or accurate, civil society activists agree that the situation has improved drastically compared to the pre-MERC era³³. After the first tariff revision process, the commission noted that “never in the history of MSEDCL had a tariff proposal been subjected to so much public debate and scrutiny”³⁴.

Analyzing the data made available by MSEDCL, Prayas claimed that MSEDCL was hiding its losses in the name of agricultural consumption. Various other organizations also raised the issue of underestimated T&D losses in the public hearing. Following the public hearing process, the MERC directed MSEDCL to undertake an energy audit, which proved crucial in bringing data into the public domain.

MERC also started the process of Technical Validation Sessions (TVS) to verify the data submitted by the MSEDCL. It invited consumer representatives to participate in the process of TVS. It proved a crucial step as CSOs got an opportunity to question the gaps in data and to seek clarification from public utility officials. The MERC also began the process of public hearings at six different places in Maharashtra—Aurangabad, Amravati, Nagpur, Nashik, Pune, and Mumbai—on the tariff proposal of the MSEDCL. The CSOs played a crucial role in shaping the regulatory space in this initial phase.

According to the first tariff proposal, 84 percent of agricultural consumers were billed on a flat-rate tariff. The data indicated that only 50 percent of the MSEDCL's consumption was metered, out of which more than 50 percent were billed on the basis of either average or minimum charge³⁵. According to MSEDCL, 22 lakh agricultural consumers were unmetered³⁶. The commission ordered that metering of unmetered consumers (e.g., agriculture, poultry, power looms, waterworks and high-tension industrial consumers) should be completed within a period of three years, by 31 March 2003³⁷.

The dissatisfaction about MSEDCL functioning was reflected in public hearings on the tariff proposal. In view of the growing questioning and criticism about the real percentage of losses, the then Power Minister Mr. Padmasinha Patil called a meeting of high level officials of MSEDCL to discuss “percentage of losses that MSEDCL should admit officially”³⁸. Since losses were very high, it was decided that MSEDCL should

³¹ He has been the only independent expert, without a career in bureaucracy, appointed as a regulator so far.

³² Prayas Energy Group, Petition to MERC, December 21, 1999, p. 2.

³³ Interview with senior activist on September 12, 2016.

³⁴ Maharashtra State Electricity Board (MSEDCL), “Three Years of MERC: A Report,” 2002, p. 13.

³⁵ MERC, Order in the matter of tariff applicable to various categories of consumers of Maharashtra State Electricity Board, Case No. 1 of 99, May 5, 2000, p. 7.

³⁶ Ibid, pp. 83-84.

³⁷ Ibid, p. 8.

³⁸ Interview with ex-chief engineer of MSEDCL on September 9, 2016.

report losses below 40 percent³⁹. After the various rounds of TVS, the MSEB revised its percentage of losses from 18 percent to 28 percent. The commission further revised it to 32 percent in its order out of which 16 percent were termed as commercial losses which meant outright theft of power. At the end of the first tariff revision process, the commission approved increase worth Rs. 512 crore (4.58 percent) in revenue as against Rs. 2,018 crore (18.85 percent) demanded by the MSEB⁴⁰. The commission disallowed 5 percent of T&D losses for the year 2000-01, which were worth Rs. 600 crores.

Another controversial issue during this phase was the purchase of power from the DPC. The consumer organizations objected to the purchase of costly power by the MSEB without following the provision of merit order dispatch⁴¹. MERC directed MSEB to follow merit order dispatch and not to buy or generate power from a plant which was costlier than the available options. However, Enron refused to accept the jurisdiction of MERC because it was not established when contract between the GoM and the DPC was signed, so the matter went to High Court. In the meantime, there was a dispute between MSEB and DPC, which changed the equation of the case.

During the first tariff revision process, Prayas recommended a range of measures to improve the performance of MSEB. The Commission noted in its first tariff order:

“Prayas has given valuable suggestions for incorporating proper evaluation systems for better performance by the MSEB, by suggesting methods for power plant performance and merit order evaluation, system metering and project performance evaluation, system performance by flying squads, quantity flow account and materials purchase and contract evaluation systems”⁴².

According to one ex-member of MERC, the members of the first commission made efforts to establish their credentials. So they rejected an invitation for tea and an informal meeting by the minister of energy⁴³. The calls from the ministers were met with polite but firm refusal to confer any favour⁴⁴. While setting up the office of MERC, the members deliberately chose transparent glass walls to increase confidence of people in the commission.

The energy audit data revealed that there were substantial problems in metering and billing in case of some HT consumers who get direct supply from sub-stations.⁴⁵ Similarly, even in 100% metered areas, T&D losses were in the range of 25 percent to 35 percent. In the second tariff revision process, the commission granted a 4 percent tariff hike (Rs. 452 crore) for FY 2001-02 as against MSEB’s proposal of 11 percent (Rs. 1456 crore). The MSEB filed an appeal before the Bombay High Court (HC) against the commission’s tariff order for FY 2001-02. In its order, the HC stated that:

“We are aghast at the claim made by the board that actual T&D losses could be in the range of 50 percent to 55 percent. At this level of T&D losses, we wonder whether the appellant

³⁹ Ibid.

⁴⁰ MERC, Revision of tariff application to various categories of consumers of MSEB, April 28, 2000, p. 9.

⁴¹ Merit order is the procedure prescribed for prioritizing generating stations while putting electricity in use. As per this procedure, different generation stations in the state are listed according to their operational cost, and electricity from least-cost stations is put in use first, followed by costlier options.

⁴² MERC, 2000, p. 60.

⁴³ Interview with ex-member of MERC on August 25, 2016.

⁴⁴ Ibid.

⁴⁵ MERC, Tariff Order for MSEB – FY 2001-02, January 10, 2002.

board is generating, purchasing and distributing power for the consumers or for the thieves of electricity ...”⁴⁶

Regarding the regulatory process in the initial period, many stakeholders share the perception that the government was caught unawares and did not know the potential role and powers of the regulatory commission⁴⁷. When the minister learned that the commission was planning to increase the tariff for agriculture, “he could not believe that it was happening, he asked how such a thing is even possible”.⁴⁸ The priority of the government was to protect the agricultural consumers, so it used the provision of subsidy in the law. But the government also had to deal with heavy criticism of the functioning of MSEB and with the growing pressure from CSOs and the MERC to improve the performance of the board, which means upsetting some well-entrenched interests. It gave rise to manipulation of data and presenting selected data before the MERC. According to one senior retired official, “MSEB had different sets of data ready and it used to provide different numbers to different stakeholders as per the demand”.⁴⁹

Responding to the consistent pressure by the CSOs, MSEB resorted to two strategies. One strategy was non-compliance with the commission’s orders, especially orders pertaining to efficiency and improvement measures, such as conducting audits, compiling databases, reducing losses, and metering farmers. The pace of installing meters for agricultural consumers was extremely slow. In the first tariff order, MERC gave directions to complete metering of 18 lakh agricultural consumers within three years. However, MSEB could provide meters to only 1.25 lakh agricultural consumers in the first two years⁵⁰. Interestingly, it failed to meter High Tension Lift Irrigation Schemes, which were only 1,100 in number. Moreover, in the tariff proposal for 2003-04, MSEB submitted that it has replaced 55 lakh meters across all categories, out of a total metered consumer base of around 1.13 crore in the state⁵¹. So it was not a question of efficiency of the utility but rather one of priorities and political will.

Another strategy was to adopt an internal reform programme to improve the performance of MSEB. This came in the wake of the state government’s proposal in 2002 to dismantle and privatize the board. The CSOs played an important role in convincing tMSEB officials that internal reforms could be used to stall the dismantling⁵². It resulted in a tripartite agreement between the government, the MSEB, and the trade unions, which aimed at making MSEB financially viable by reducing losses and improving service⁵³. The trade unions established an Internal Reform Cell within the MSEB and formed committees at the local, middle, and higher levels to undertake theft reduction measures.⁵⁴ Suggestions were invited from the local level employees and there was hope that performance of MSEB could be improved. Many officials worked hard and motivated their juniors to achieve loss reduction targets. One long-standing demand of the MSEB trade union was to apply Government Employee Protection Act to MSEB employees because they regularly face threats and physical assaults from influential consumers during anti-theft drives⁵⁵. However, this agenda of internal reform lost steam over a period of time and although some officers continued their efforts to improve internal functioning of MSEB, the widespread

⁴⁶ MERC, 2002, pp. 125-26.

⁴⁷ Interview with civil society activists and MSEB officials during September and October 2016.

⁴⁸ Interview with ex-chief engineer of MSEB on September 13, 2016.

⁴⁹ Ibid.

⁵⁰ MERC, 2002, p. 96.

⁵¹ MERC, Tariff Order for MSEB – FY 2003-04, March 10, 2004, p. 119.

⁵² Interview with senior activist on September 29, 2016.

⁵³ MSEB, 2002, p. 8.

⁵⁴ Interview with trade union member, MSEDCL, on September 18, 2016.

⁵⁵ Ibid.

enthusiasm among the employees receded considerably. Eventually, the GoM dismantled the MSEB into four companies and corporatized these companies in 2005.

The role of political leaders became controversial during this phase because of their indiscriminate use of power to install and remove a series of MSEB chairpersons. Over a period of nine years from 1998 to 2006, the government changed the chairpersons or managing directors (MDs) of MSEB/MSEDCL nine times⁵⁶. The transfer of Sanjay Bhatia, the MD of MSEDCL, in October 2006 became controversial as it came in the wake of a disconnection drive in the city of Nagpur in which electricity supply to the official residence of Vilasrao Deshmukh, then chief minister, was cut off to recover a pending bill of Rs. 1.20 lakh⁵⁷. Earlier, the transfer of Vinay Bansal, the MSEB chairman who took the lead in rescinding the PPA with Enron, hit the headlines. CSOs alleged that honest and efficient officers were transferred frequently⁵⁸. In response to the scathing criticism from the CSOs in public hearings on the inability of the utility to reduce theft and meter agricultural consumers, MSEDCL suggested that “practical improvement trajectories should be considered rather than unachievable targets”.⁵⁹ It stated that adequate time should be given to reduce losses and that “one has to be sensitive to ground realities”.⁶⁰ The MSEDCL also emphasized the need for capital investment to build infrastructure in order to reduce losses. The MSEDCL classified circles based on the level of distribution losses into A (0-18 percent distribution loss), B (18-26 percent), C (26-34 percent), D (34-42 percent), E (42-50 percent), and F (above 50 percent). The circles with greater losses faced longer hours of load-shedding as a punishment. Table 4 shows circles with higher losses in the year 2007; most of them were constituencies of influential political leaders and ex-chief ministers of Maharashtra.

Table 4: Circles with Losses More than 50 Percent in 2007

SL	Name of Circle	Total Loss	Commercial Loss	Technical Loss
1	Parbhani Circle	66.77%	43.06%	23.71%
2	Nanded Circle	65.65%	41.82%	23.83%
3	Beed Circle	65.45%	41.13%	24.32%
4	Latur Circle	60.45%	37.85%	22.60%
5	Osmanabad Circle	55.86%	32.04%	23.83%
6	Solapur Circle	50.37%	31.58%	18.79%

Source: MERC Tariff Order for 2007-08 to 2009-10

As the state assembly elections approached in 2004, the issue of free power to the agricultural consumers assumed importance. The opposition leader Bal Thackarey once again announced free power

⁵⁶ Interview with senior activist on September 29, 2016.

⁵⁷ Mid Day, Power Cut, October 28, 2006.

⁵⁸ Interview with senior activist on September 29, 2016.

⁵⁹ MERC, Tariff Order for MSEDCL for FY 2006-07, October 20, 2006, p. 35

⁶⁰ Ibid.

to farmers under the Jai Kisan scheme in his election campaign. Although leaders of the ruling Congress-NCP coalition were not in favour of free power, they could not resist the pressure of electoral competition⁶¹. The commission insisted that the government should pay the amount of the subsidy to MSEB in advance. Accordingly, the government paid MSEB Rs. 400 crore, and the next day the same amount was sent back to the government by the MSEB as a repayment of the loan.

This period also witnessed the further decline of the cooperative sugar factories, which were plagued by dynastic rule, huge losses, corruption, and misappropriation of funds. In 2004-05, out of the total 190 cooperative sugar factories in the state, 77 had closed down, 17 were in grave crisis, 26 were in mitigable crisis, and only 70 were in profit⁶². It resulted in declining credibility of Maratha leaders and contributed to an agricultural crisis in rural Maharashtra. The share of the agriculture sector in state GDP has been declining consistently (from 34 percent in 1960-61 to 16 percent in 2000-01), while that of secondary and tertiary sector was going up (see Table 6). The GoM focused on industrial and service sector growth in the state. It adopted a Special Economic Zone (SEZ) policy in February 2006, and between that time and 2014, 236 SEZ proposals were received. Of these, 124 SEZs were approved by the central government. In 2015, 24 SEZs with total investment of Rs. 18,786 crore were operational⁶³.

The power situation in Maharashtra worsened during this period. Since 2005, load shedding in the state has increased substantially. Although the demand-supply gap has been increasing for quite a few years, there have not been any significant efforts to improve availability of power. By the year 2005-06, the peak deficit reached 23 percent. In 2005, the MSEB slipped to 12th in the ranking of all state electricity boards. Heavy load-shedding led to frequent power cuts and then to public protests in different regions of the state. MSEB offices and employees were attacked in Pune, Nagpur, and Amravati.

Prayas suggested a range of options to reduce the impact of load-shedding on rural areas and poor consumers, and the MERC accepted many of these critical suggestions⁶⁴. Prayas suggested the need to develop a well-articulated procedure for sharing of load restrictions in order to reduce the discretion of the utility in this matter. MERC accepted it, and Maharashtra became the first state in the country to follow a procedure in the case of load-shedding⁶⁵. Second, MERC agreed to implement Prayas' suggestion that load-shedding in rural areas should be restricted to a maximum duration of eight hours and in two slots of four hours each⁶⁶. Third, it accepted the imposition of an additional "load management charge" of Rs 1/unit on electricity consumed by wealthy customers beyond 70 percent of their usual consumption⁶⁷.

In June 2005, the Government of Maharashtra unbundled the (MSEB) into four companies. Energy Minister Dilip Walse-Patil was appointed as the chairman of the holding company. There was pressure on these companies to report healthy financial conditions, so they adopted certain measures such as widening consumer base by regularizing illegal connections, collecting dues from consumers, and

⁶¹ M.K. Datar, "Maharashtra's Finances: Too Good to be True?" *Economic and Political Weekly*, Vol. 40, Issue No. 18, April 30, 2005, p. 1812.

⁶² B.S. Baviskar, "Cooperatives in Maharashtra: Challenges Ahead," *Economic and Political Weekly*, October 20, 2007, p. 4219.

⁶³ Sanjay Jog, "Maharashtra Government to Review SEZ Policy," *Business Standard*, April 7, 2015.

⁶⁴ Interview with senior activist on September 29, 2016.

⁶⁵ Ibid.

⁶⁶ MERC, Order in the matter of Principles and Protocol to be adopted for Load Shedding by MSEB, Case No. 5 of 2005, 16 June 16, 2005, p. 5.

⁶⁷ MERC, Order in the matter of Directions to Distribution Licensees under Section 23 of E-Act, 2003 to curb demand, Case No. 4 of 2005, April 26, 2005, p. 1.

working on profit-enhancing strategies. But there was no real change in terms of increased autonomy or independence of management of these companies.

Regulation of Private Utilities

The MERC started reviewing MSEB tariffs in 1999, but private utilities such as TPC and BSES were not under the purview of the Commission till 2003. Prayas submitted an application in August 2002 requesting the MERC to review the tariffs charged by TPC and BSES⁶⁸. In spite of the objections raised by the TPC, the MERC upheld Prayas' position and decided to undertake a review of the tariffs⁶⁹. In the subsequent public process, Prayas asked the MERC to review reasonableness of the capital expenditure proposed by REL⁷⁰. After trying to seek data from REL, MERC directed REL to prepare a detailed project report of capital expenditure schemes that were more than Rs. 10 crore and to take prior approval of the commission to implement such schemes⁷¹. It led to setting up an important procedure to evaluate capital-intensive projects.

Prayas objected to TPC's approach of funding capital expenditure of around Rs 400 crores in FY 2004-05 entirely through equity, when the option of debt was cheaper than equity⁷². It demanded that the commission apply the norm of a debt-to-equity ratio of 70/30 to the present capital structure, which would save consumers Rs. 150 crore per year⁷³. The Commission accepted this suggestion, stating that it was unreasonable to fund all capital expenditure through equity when other cheap sources of funds were available.

After hearing the objections from participants on the tariff proposals of TPC and REL, the Commission reduced the tariff of REL by 8.5 percent and TPC by 9.2 percent. It meant saving of Rs. 300 crore per year for the consumers in Mumbai. In the 187-page-long tariff order of the MERC on TPC, the name of Prayas appeared 99 times⁷⁴. Similarly, the 139-page order on BSES's tariff referred to Prayas' submission 77 times⁷⁵.

Overall, this phase was one of turmoil and strong civil society action in the electricity sector in Maharashtra. It experienced strong civil society action, and the process of public hearings almost reached the stage of deliberation. For lack of space, it is not possible to enumerate all the cases where number of organizations contributed in shaping final decisions in the electricity sector. But broadly, the intervention by civil society groups was at three levels: first, influencing the policymaking process at the central and state government levels; second, participation in the regulatory proceedings to improve governance of the electricity sector; and third, creation and dissemination of technically sophisticated analysis and information to educate other groups and individuals in society. The civil society intervention showed that it is possible to increase the quality of input that goes into the system substantially and to highlight hitherto neglected concerns of people. The MERC recognized and appreciated the role of the CSOs in its orders. When asked about the specific issues/decisions to which the CSOs has contributed, one of the members of the MERC said, "it is

⁶⁸ MERC, Tariff Order for TPC – FY 2003-04 and FY 2004-05, Case No. 30 of 2003, June 11, 2004, pp 1-2.

⁶⁹ MERC, Case No. 30 of 2003, pp. 4-5.

⁷⁰ MERC, Tariff Order for BSES – FY 2003-04 and FY 2004-05, Case No. 18 of 2003, July 1, 2004, p. 31.

⁷¹ MERC, Case No. 18 of 2003, p. 98.

⁷² MERC, 2004, p. 39.

⁷³ Ibid.

⁷⁴ MERC, Case No. 30 of 2003.

⁷⁵ MERC, Case No. 18 of 2003.

difficult to recollect even a single decision, which has some significance for the sector, to which the CSOs in Maharashtra *have not* effectively contributed”. The civil society groups also had great hope from the participatory process in the initial period. According to Prayas,

“It (the public hearing) proves that such a comprehensive, transparent, effective process can be conducted without sponsorship of the World Bank. This was a detailed process with wide participation. However, contrary to apprehensions, it was not very time-consuming nor did it fall prey to unwarranted litigation. Though the order was tough on farmers, power-loom owners, and residential consumers, there was not even a semblance of violence. The success of public process in Maharashtra leads us to the conclusion that the rational resolution of complex and convoluted problems with minimum conflict and strife is possible if all sections are allowed to participate in an open and transparent decision-making process, conducted by a truly accountable and impartial body”⁷⁶.

This phase also saw state government playing a balancing act between the interests of industry and agriculture. The cost of power increased during this period for all categories. The commission also tried to follow the objective of reducing cross-subsidy. As a result, there was a tariff hike for the agricultural category, but all agricultural consumers were not metered and collection efficiency in rural circles has remained very low. Further, the government retained the subsidy for agricultural and powerloom consumers and declared free power for agriculture before the 2004 election. As a result, the agriculture sector did not face severe tariff shock. When load-shedding severely affected Maharashtra, MERC provided uninterrupted electricity to some urban and industrial centres using the Pune model: In the city of Pune, some industries with diesel generation sets or captive power plants came forward to generate electricity during peak hours. Since the cost of electricity generation by industries was much higher than MSEDCL's cost, consumers were charged an additional “reliability charge”. MERC conducted a detailed public process before adopting this model.

Phase IV: 2008-2014—New Challenges and New Interests

Along with the tussle between industry and agriculture, two major processes dominated this phase. One is the competition between private utilities in Mumbai, and the other is the increasing clout of private power producers with whom MSEDCL signed power purchase agreements. The role of the APTEL and Supreme Court also proved crucial in this phase, thus highlighting the overtly legalistic turn of the processes in the electricity sector. The old actors and old issues persisted, but the new actors and new processes complicated the situation further and posed new challenges for various actors in the sector.

Private Utilities in Mumbai

Mumbai has four distribution companies: Rlnfra, (previously BSES), BEST, TPC, and MSEDCL. Traditionally, TPC generated electricity and supplied it to BSES, BEST, and individual large consumers. Although Rlnfra was dependent on the TPC for power, it avoided signing any long-term contract with the TPC. When TPC showed its inability to provide power to Rlnfra, it resorted to legal battles in 2007 and

⁷⁶ Prayas Energy Group, “Power Sector in Maharashtra: Prescription for Growth,” in Sekhar, Y. Chandra (ed.), *Indian Power Sector Reforms: Lessons and Experiences* (ICFAI University Press, Hyderabad, 2004), p. 142.

2009⁷⁷. However, the court verdict went in favour of TPC. To avoid load-shedding, RInfra purchased costly power from the market which led to increase in its power cost and subsequently in increase in losses. During the same period, the TPC claimed the right to parallel licensing in the RInfra license area. Again there was a long legal battle, which went through various forums and ended in favour of the TPC. Since TPC's tariff was considerably lower than Rinfra's, many large industrial consumers shifted to TPC-D. Finally, the MERC intervened first by applying various surcharges for migrating consumers, and second by putting restrictions on TPC's use of the RInfra distribution network. As a result, the ability of Mumbai consumers to choose their distribution utility has largely been curtailed. Further, the TPC entered into a long-term PPA with their sister company without competitive bidding, which resulted in a tariff hike for TPC consumers, so there was not much incentive for consumers to shift to TPC. Because the stakes of both the companies were very high, it gave rise to litigation. Both the companies challenged various orders by the MERC in APTEL or higher court⁷⁸. This process of legal battles kept tariff-related matters subjudice for a long time without providing any final decision.

The situation of Mumbai's power sector has become highly complex, with a plethora of regulatory orders and APTEL and Supreme Court decisions providing contradictory interpretations of provisions. Further, the expectation that competition would lead to reduction in tariffs has not been fulfilled. In fact, both the private companies failed to contract power through competitive bidding, citing various reasons. According to one senior activist, "we thought Tata [would] put pressure on Reliance to reduce its rates. But Tata became like Reliance ... In fact, MSEDCL followed a much better process of competitive bidding than these two companies".⁷⁹ Both the companies spent huge funds on litigation, because a favourable decision implied a profit of crores of rupees. The CSOs, meanwhile, face constraints of time and funds to participate in the legal battles at higher levels. Consequently, there is inadequate representation of consumer perspective at APTEL or the Supreme Court. Further, the whole process becomes highly technical and legalistic at higher level in which socio-political considerations take a backseat.

Increasing Role of Private Power Producers

MSEDCL adopted a competitive bidding process for capacity addition in view of the growing demand-supply gap in the state. It contracted 6,115 MW of capacity by entering into contract with the private power producers, such as Adani Power Maharashtra, Lanco Kondapalli Power, JSW Energy, Indiabulls Power Research, and Emco Energy⁸⁰. In the first round of bidding, MSEDCL signed PPAs for about 2,000 MW of capacity. However, the PPAs with Lanco went into dispute because of procedural lapses on the part of MSEDCL⁸¹. The agreements with JSW and Adani also went into dispute because these companies sought tariff revisions on the pretext of an increase in the price of coal after quoting the lowest price in the bidding process. The MERC, however, accepted the argument of these private companies and allowed them compensatory tariff. The matter went to the APTEL, which disallowed compensatory tariff to Adani, stating that regulatory commissions have no power to grant compensatory tariff where it is discovered by a competitive bidding process⁸². In the meantime, the CERC advised the Ministry of Power to make suitable changes in the law to increase the scope of regulatory intervention in the decisions on

⁷⁷ Ashwini Chitnis and Ann Josey, "Review of Maharashtra Power Sector Policy and Regulation: Lessons, Challenges, and Opportunities," Gokhale Institute of Politics and Economics and Barve Trust, 2015, p. 30.

⁷⁸ Interview with senior activist on September 29, 2016.

⁷⁹ Interview with senior activist on July 14, 2016.

⁸⁰ Chitnis and Josey, 2015, p. 13.

⁸¹ For the review of the process of competitive bidding, see Chitnis and Josey, 2015, pp. 11-15.

⁸² "APTEL disallows compensatory tariff for Adani Group's plants," *Economic Times*, May 12, 2016.

compensatory tariff⁸³. Based on CERC's advice, MoP wrote a letter to state commissions and advised them to deal with these issues on a case-to-case basis. After issuing of this letter, almost all projects in Maharashtra filed cases before the MERC seeking revision of the discovered tariff⁸⁴. So all the capacity contracted by the MSEDCL through competitive bidding came under litigation, and there is a strong likelihood of upward revision of tariffs.

These developments indicate the emergence of a new interest group in the power sector: private power producers. As in the case of the Mumbai power sector, the issues pertaining to bidding and PPAs are highly technical and tend to take a legalistic route, making CSO intervention difficult. This process is likely to increase electricity tariffs in future.

During this period, the share of the agriculture sector in state GDP reduced further, to 13 percent. The proportion of workers engaged in the agricultural sector (cultivators, labourers, livestock, forestry, fishing, etc.) however, has not declined substantially, leading to pauperisation of the rural population (see Table 5).

Table 5: Sectoral Composition of State Income (in Percentage)

Year	1960-61	1970-71	1980-81	1990-91	2000-01	2011-12
Primary	34%	24%	25%	22%	16%	13%
Secondary	26%	32%	33.5%	33%	26%	30%
Tertiary	40%	44%	41.5%	45%	58%	57%

Source: Budgetary papers of Government of Maharashtra from 1960 to 2013

The main contributors to the service sector are trade, hotels, and restaurants; banking and insurance; and real estate, ownership of dwelling, and business services. In the last two decades, there has been an emphasis on export-oriented growth, which included special economic zones, tourism, and horticulture. Maharashtra has the largest number of special export promotion zones in India. It has received around 20 percent of the total foreign direct investment (FDI) in India in 2011-12⁸⁵. The state government also promoted the IT industry, bio-technology parks, and mega projects in the last two decades. It has developed 37 public IT parks with the investment of Rs. 18,000 crore and approved 160 private IT parks, mainly in and around the industrial belt in Maharashtra⁸⁶. Industries in Maharashtra contribute 18 percent of capital and 22 percent of net value added to the country⁸⁷.

The electricity tariff for industry increased during this period, which led to protests from the industrial sector, along with other sectors, in 2010. There were demands that losses should be reduced and agricultural consumers should be metered. Surprisingly, from 2007, losses started dropping rapidly, sometimes exceeding the targets set by the MERC for loss reduction (see Table 6). In 2013-14, losses were down to 17 percent. The CSOs raised questions about the true state of losses in Maharashtra, since the increased revenue due to loss reduction did not result in a corresponding decrease in the demand

⁸³ CERC, Statutory Advice of the CERC under Section 79 (2) of the Electricity Act, 2003, regarding Impact on Tariff on the concluded PPAs due to domestic coal availability, May 20, 2013.

⁸⁴ Ibid.

⁸⁵ Director of Economics and Statistics, Economic Survey of Maharashtra: 2012-13, GoM, 2012, pp 1-2

⁸⁶ Director of Economics and Statistics, Economic Survey of Maharashtra: 2015-16, GoM, 2016, p. 107.

⁸⁷ Ibid.

for tariff by MSEDCL. Moreover, MSEDCL showed an increase in agricultural consumption that was difficult to verify in view of unmetered supply to agriculture. In a public hearing in 2012, MSEDCL argued that strong opposition of consumers and lack of adequate provision of capital expenditure are the reasons for its failure to meter agricultural consumers. It further claimed that “it is not only difficult, but also *unrealistic, uneconomical, and unviable* to install meters to un-metered agricultural consumers” (emphasis added)⁸⁸. MSEDCL instead proposed an action plan of group metering of un-metered agricultural consumers, which involves installing meters at substation for all separate agriculture feeders and in case of mixed feeders, for all agriculture-dominated distribution transformers⁸⁹.

The rising cost of power in Maharashtra is partly due to the failure of MSEDCL to rein in its increasing costs of purchase. There were protests against rising power bills by farmers, mill owners, and small-scale industry organizations. In November 2013, eight lakh powerlooms in Bhiwandi and another three lakh in textile clusters in Maharashtra, including Malegaon and Ichalkaranji, went on strike to protest tariff hikes. In view of state assembly elections in October 2014, the GoM appointed a committee under Industry Minister Narayan Rane, which recommended a 10–20 percent reduction in tariff across industrial, domestic, and agricultural sectors for the next ten months from January 2014 to October, 2014⁹⁰. It stated that a 20 percent subsidy across categories would cost the government Rs. 7,057 crores. It suggested that the state government should provide Rs. 6,057 crores and seek Rs. 1000 crores from MSEDCL. The suggestions of the Rane Committee remained on paper as the Congress-NCP lost power in the 2014 elections. Compared to some neighbouring states, the capital expenditure of MSEDCL has remained high, which is also a cause of concern as it increases the cost of power.

Table 6: Maharashtra: Transmission and Distribution Losses (in Percentage)

Year	Losses
2001-02	39.49%
2002-03	39.7%
2003-04	36.62%
2005-06	31.78%
2006-07*	38.12%
2008-09	28.75%
2009-10	27.44%
2010-11	23.47%
2011-12	18.23%
2012-13	17.23%
2013-14	16.77%
2014-15	15.50%

Source: Various tariff orders of MERC from 2001 to 2014
** Aggregate technical and commercial losses after 2006-07*

⁸⁸ MERC, Suo Moto hearing in the matter of revision and violation of Principles and Protocols of Load Shedding with respect to Circular No. 43 and 44 of MSEDCL, November 26, 2012, p. 263.

⁸⁹ Ibid.

⁹⁰ “Rane Panel Report Suggests 10-20% cut in power tariff for 10 months,” *Indian Express*, January 17, 2014.

The Maharashtra government retained the subsidy it used to provide to agricultural and powerloom consumers. The amount of subsidy consistently rose, from Rs. 493 crore in 2001-02 to Rs. 4,057 crore in 2011-12. Further, writing off arrears as bad debts also continued unabated. There was a consistent increase in arrears from the year 2000-01 (Rs. 3775 crore) to year 2013-14 (Rs. 16,220 crore). Accordingly, provision for bad debts made by the government increased from Rs. 200 crore (2000-01) to Rs. 702 crore (2012-13). For 2014-15 and 2015-16, Rs. 353 crore was provided. Almost all consumer categories have arrears; however, about 40 percent of arrears (worth Rs. 6,000 crores) are from agricultural consumers. Thus, the state continued to protect agricultural consumers even in the face of stiff opposition from the industrial sector.

Conclusions

The BJP-SS coalition came to power in Maharashtra in 2014. In this election, both the parties made inroads in western Maharashtra, which has been the traditional stronghold of the Congress-NCP. Many strong Maratha leaders joined the BJP in this process⁹¹. The traditional support base of the BJP is urban, white-collar workers, traders and Brahmins, but the party was successful in consolidating its new rural support base in various parts of the state in this election. After assuming power, the new government took many decisions to dismantle the patronage network of the Congress-NCP, mainly in the cooperative sector. The energy ministry now plans to develop a differential tariff structure for farmers based on the size of their land and the crops they grow⁹². Considering the widening base of the BJP-SS in rural areas, it will be interesting to see how the government operationalizes this measure, which could potentially upset the big farmers. It requires metering of all agricultural consumers which according to MSEDCL is an unachievable task. In the recent tariff hearing process, data obtained from MSEDCL revealed that half of the circles and 83 percent of 4021 feeders, for which data is available, have negative losses⁹³, which indicates blatant manipulation of data by MSEDCL. So it seems that the ruling coalition at present has limited room to manoeuvre and to induce changes in behaviour by either the bureaucracy or dominant interest groups.

In the last few years, the challenges before the MSEDCL have assumed new dimensions. These challenges are mainly of four kinds: a) problem of excess capacity addition and declining demand; b) a growing number of big consumers willing to procure electricity through open access; c) management of electricity procurement in view of the rising cost of power of public utilities and availability of cheaper power in the open market; and d) increasing pressure from the central government to increase the share of renewable energy in the overall energy mix and likely migration of consumers due to solar rooftop net metering.

Table 7 shows energy procured through open access in the last few years. At present, the strategy of the MSEDCL and the state government is to create hurdles in the way of outgoing consumers, by increasing cross-subsidy surcharges and adopting delaying tactics such as non-clearance of applications for open access. However, in view of the increasing cost of MSEDCL power, it seems difficult to slow this trend. The changes in technology and new policies will benefit the big consumers, especially industrial and

⁹¹ Suhas Palshikar, "Maharashtra Assembly Elections: Farewell to Maratha Politics?" *Economic and Political Weekly*, November 1, 2014.

⁹² Interview with energy minister on October 30, 2016.

⁹³ MERC, MYT Order for MSEDCL for the period from FY 2016-17 to FY 2019-20, November 3, 2016, p. 29.

commercial users and the upper middle class. The flight of subsidizing consumers from the system will hamper the finances of the public utility and increase the problems of subsidized-category consumers.

Table 7: Amount of Energy Procured Through Open Access (Million kWh)

FY12	FY13	FY14	FY15	FY16
865	3,750	4,469	4,441	5,707

Source: MSEDCL report, 2015

There were large capacity additions by the MSEDCL from 2007 to 2012, so the state no longer faces the problem of demand-supply gap and power shortages. However, due to sluggish industrial growth and high cost of power, there was less demand than the MSEDCL anticipated. In view of the surplus power, some of the MSPGCL plants had to be backed down in the last few years. Thus, Maharashtra has a paradoxical situation of surplus power on the one hand and unelectrified households on the other. The cost of power of MSPGCL plant is so high that it cannot exercise the option of selling the excess power on the open market. There has been a growing demand to rationalize power purchase planning by shifting to private power instead of relying on costly public-sector plants.

The obligation to buy renewable power is another area of concern because of its high cost. MSEDCL proposed to buy 7.4 percent of its total power from the renewable sources at the rate of Rs. 5.77/kWh in the recent tariff proposal⁹⁴. The RPO obligations are expected to further increase the cost of power. Additionally, rooftop solar power is a potential game-changer that is likely to upset the balance sheet of MSEDCL like never before.

In a nutshell, rapid changes in the sector project a grim picture of the future of the public utility. The first decade of regulatory reforms in Maharashtra brought the interplay of various interest groups out into the open and highlighted the role of politics in perpetuating the problems in the sector. Highly effective civil society intervention played a crucial role in changing the discourse in the sector and in devising ways to control the excesses of interest-group politics. Regulatory commissions played their role, sometimes an exemplary one, but many times fulfilling the expectations of the political system at the cost of their credibility and to the detriment of the sector. Till recently, regulatory governance seemed to have gained a foothold in the sector, with routinization of the processes of tariff-setting and dispute resolution, until the new wave of technological and policy changes started shaking the system to the core. The challenges before the system now see mammoth and outside the purview of the traditional rulebook of political management of the sector. It will lead to slow but sure dismantling of the system unless the political leadership can come up with innovations to reverse some of the detrimental trends.

⁹⁴ MERC, 2016, p. 40.